

## REMARKS

This is a complete and timely response to the non-final Office Action mailed August 7, 2007. Claims 1-13 are pending in the application. Claims 1, 9, 12 and 13 are amended. The subject matter of amended claims 1, 9, 12 and 13 is supported in at least the fifth paragraph on page 5 of Applicants' originally filed specification. Accordingly, no new matter is added. In light of the foregoing amendments and following remarks, Applicants request reconsideration of the application and pending claims.

### Claim Rejections Under 35 U.S.C. §102 - Claims 1-3, 9 and 12

#### A. Statement of the Rejection

Claims 1-3, 9 and 12 stand rejected under 35 U.S.C. §102(c) as allegedly being anticipated by U.S. Patent No. 6,760,391 to Alb *et al.* (hereinafter, *Alb*).

#### B. Discussion of the Rejection - Claims 1-3, 9 and 12

A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. *See, e.g., In re Paulsen*, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Alternatively, anticipation requires that each and every element of the claimed invention be embodied in a single prior art device or practice. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). The test is the same for a process. Anticipation requires identity of the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *See, e.g., Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir. 1995). Those elements must either be inherent or disclosed expressly. *See, e.g., Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir.

1987). Those elements must also be arranged as in the claim. *See, e.g., Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991).

Accordingly, the single prior art reference must properly disclose, teach or suggest each element of the claimed invention.

Applicants' independent claims 1 and 9, as amended, are not anticipated by *Alb* for at least the reason that *Alb* fails to disclose, teach, or suggest each element in the claims.

#### **1. Claims 1-3**

Applicants' claim 1, as amended, is directed to a system for optical communication networks which includes a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, "said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to an optical signal parameter by causing said optical transceivers to transmit and receive at a different rate, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

In contrast with Applicants' claimed system, *Alb* (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and a customer premise. *Alb*, column 4, lines 20-24, indicates that links 12, 14, and 16 can be made up of wider-bandwidth physical media such as coaxial cable optical fiber and radio.

However, in contrast with Applicants' amended claim 1, *Alb* is entirely silent regarding an error condition detected via an optical signal parameter that comprises "one of a code word violation and an optical modulation amplitude."

Accordingly, for at least this reason, Applicants respectfully submit that independent claim 1 is allowable over *Alb*.

Further, Applicants respectfully submit that dependent claims 2 and 3, which depend directly from allowable independent claim 1, are allowable for at least the reason that they depend from an allowable independent claim. *In re Fine*, 837 F.2d 1071, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1998).

Accordingly, favorable reconsideration and withdrawal of the rejection of claims 1-3 under 35 U.S.C. § 102 are respectfully requested.

## 2. Claim 9

Applicants' claim 9, as amended, is directed to a method for operating an optical communication network which includes the step of "evaluating said data responsive to a parameter observed on an optical signal to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude," among other steps.

In contrast with Applicants' claimed method, *Alb* (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and a customer premise. *Alb*, column 4, lines 20-24, indicates that links 12, 14, and 16 can be made up of wider-bandwidth physical media such as coaxial cable optical fiber and radio.

However, in contrast with Applicants' amended claim 9, *Alb* is entirely silent regarding the step of "evaluating said data responsive to a parameter observed on an optical signal to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

Accordingly, for at least this reason, Applicants respectfully submit that independent claim 9 is allowable over *Alb*.

Accordingly, favorable reconsideration and withdrawal of the rejection of claim 9 under 35 U.S.C. § 102 are respectfully requested.

### 3. Claim 12

Applicants' claim 12, as amended, is directed to an optical transceiver module for a rate adaptive system for optical communication networks which includes "means for determining an error condition responsive to a parameter derived from observation of the optical signal, wherein the error condition comprises one of a code word violation and an optical modulation amplitude," among other means.

In contrast with Applicants' claimed method, *Alb* (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and a customer premise. *Alb*, column 4, lines 20-24, indicates that links 12, 14, and 16 can be made up of wider-bandwidth physical media such as coaxial cable optical fiber and radio.

However, in contrast with Applicants' amended claim 9, *Alb* is entirely silent regarding "means for determining an error condition responsive to a parameter derived from observation of the optical signal, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

Accordingly, for at least this reason, Applicants respectfully submit that independent claim 12 is allowable over *Alb*.

Accordingly, favorable reconsideration and withdrawal of the rejection of claim 12 under 35 U.S.C. § 102 are respectfully requested.

**Claim Rejections Under 35 USC § 103 – Claims 4-11 and 13**

**A. Statement of the Rejections**

Claims 4, 5 and 10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* in view of U.S. Patent No. 5,808,760 to Gfeller, hereafter *Gfeller*.

Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* and admitted prior art in view of U.S. Patent No. 6,690,650 to Stener, hereafter *Stener*.

Claims 8 and 11 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* and *Gfeller* in further view of U.S. Patent No. 6,647,058 to Bremer, hereafter *Bremer*.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* and admitted prior art in view of *Bremer*.

**B. Discussion of the Rejections**

Applicants independent claims 1, 9 and 13, as amended, include features that are not found in the proposed combinations.

For a claim to be properly rejected under 35 U.S.C. § 103, “[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. In order to make a proper *prima facie* case of obviousness; three basic criteria must be met, as set forth in MPEP § 706.02(j). First, there must be some suggestion or motivation; either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant’s disclosure.”

Applicants’ dependent claims 4 and 5 depend directly or indirectly from amended independent claim 1. Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the

asserted combination does not disclose, teach or suggest at least the aforementioned features of claim 1.

As shown above, *Alb* fails to disclose, teach or suggest “a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, “said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to an optical signal parameter by causing said optical transceivers to transmit and receive at a different rate, wherein the error condition comprises one of a code word violation and an optical modulation amplitude.”

*Gfeller* is cited for its alleged disclosure of various features of claims 4 and 5 other than the aforementioned features. Applicants respectfully submit that *Gfeller* does not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb* and *Gfeller* do not teach all features of dependent claims 4 and 5, which depend directly or indirectly from claim 1.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claims 4 and 5 under 35 U.S.C. § 103 are respectfully requested.

Applicants’ dependent claims 6 and 7 depend directly from amended independent claim 1. Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the asserted combination of *Alb*, applicant admitted prior art (AAPA) and *Stener* does not disclose, teach or suggest at least the aforementioned features of claim 1.

As shown above, *Alb* fails to disclose, teach or suggest “a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, “said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to an optical signal parameter by causing said optical transceivers to transmit and receive at a different rate, wherein the error condition comprises one of a code word violation and an optical modulation amplitude.”

AAPA and *Stener* are cited for the alleged disclosure of various features of claims 6 and 7 other than the aforementioned features. Applicants respectfully submit that AAPA and *Stener* do not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb*, AAPA and *Stener* do not teach all features of dependent claims 6 and 7, which depend directly from claim 1.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claims 6 and 7 under 35 U.S.C. § 103 are respectfully requested.

Applicants' dependent claim 8 depends directly from amended independent claim 1. Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the asserted combination of *Alb*, *Gfeller* and *Bremer* does not disclose, teach or suggest at least the aforementioned features of claim 1.

As shown above, *Alb* fails to disclose, teach or suggest "a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, "said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to an optical signal parameter by causing said optical transceivers to transmit and receive at a different rate, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

*Gfeller* and *Bremer* are cited for the alleged disclosure of various features of claim 8 other than the aforementioned features. Applicants respectfully submit that *Gfeller* and *Bremer* do not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb*, *Gfeller* and *Bremer* do not teach all features of dependent claim 8, which depends directly from claim 1.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 8 under 35 U.S.C. § 103 are respectfully requested.

Applicants' dependent claim 10 depends directly from amended independent claim 9. Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the asserted combination does not disclose, teach or suggest at least the aforementioned features of claim 9.

As shown above, *Alb* fails to disclose, teach or suggest the step of "evaluating said data responsive to a parameter observed on an optical signal to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

*Gfeller* is cited for its alleged disclosure of various features of claim 10 other than the aforementioned features. Applicants respectfully submit that *Gfeller* does not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb* and *Gfeller* do not teach all features of dependent claim 10, which depends directly from claim 9.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 10 under 35 U.S.C. § 103 are respectfully requested.

Applicants' dependent claim 11 depends directly from amended independent claim 9. Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the asserted combination of *Alb*, *Gfeller* and *Bremer* does not disclose, teach or suggest at least the aforementioned features of claim 9.

As shown above, *Alb* fails to disclose, teach or suggest the step of "evaluating said data responsive to a parameter observed on an optical signal to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

*Gfeller* and *Bremer* are cited for the alleged disclosure of various features of claim 11 other than the aforementioned features. Applicants respectfully submit that



*Gfeller* and *Bremer* do not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb*, *Gfeller* and *Bremer* do not teach all features of dependent claim 11, which depends directly from claim 9.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 11 under 35 U.S.C. § 103 are respectfully requested.

Applicants' claim 13, as amended, is directed to a method for operating an optical communication network which includes the step of "evaluating said test signals to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude," among other steps.

In contrast with Applicants' claimed method, *Alb* (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and a customer premise. *Alb*, column 4, lines 20-24, indicates that links 12, 14, and 16 can be made up of wider-bandwidth physical media such as coaxial cable optical fiber and radio.

However, in contrast with Applicants' amended claim 13, *Alb* is entirely silent regarding the step of "evaluating said test signals to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude."

Without conceding the propriety of the asserted combination or whether one of ordinary skill would have been motivated to make the asserted combination for the alleged reason, Applicants respectfully submit that the asserted combination of *Alb*, *AAPA* and *Bremer* does not disclose, teach or suggest at least the aforementioned features of claim 13.

As shown above, *Alb* fails to disclose, teach or suggest the step of “evaluating said test signals to determine if an error condition exists, wherein the error condition comprises one of a code word violation and an optical modulation amplitude.”

*AAPA* and *Bremer* are cited for the alleged disclosure of various features of claim 13 other than the aforementioned features. Applicants respectfully submit that *AAPA* and *Bremer* do not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings of *Alb*, *AAPA* and *Bremer* do not teach all features of independent claim 13.

Accordingly, favorable reconsideration and withdrawal of the rejection of claim 13 under 35 U.S.C. § 103 are respectfully requested.

### **CONCLUSION**

For at least the reasons set forth above, Applicants respectfully submit that pending claims 1-13 are allowable over the cited art of record and the present application is in condition for allowance. Accordingly, a Notice of Allowance is respectfully solicited. Should the Examiner have any comments regarding the Applicants’ response, Applicants request that the Examiner telephone Applicants’ undersigned attorney.

Respectfully submitted,

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